REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Status of the Claims and Explanation of Amendments

Claims 1-6 are pending. By this paper, claims 1 and 5 are amended. The "control means" of claim 1 is amended recite that it causes "said print medium feeding means and said print medium conveying means to perform" a print medium feeding and conveying operation "in which said print medium is conveyed" continuously. Claim 1 is amended to further recite "there is an overlapping period in which said print medium feeding means and said print medium conveying means are driven simultaneously, and said control means provides control such that said preliminary ejecting operation is not performed in the overlapping period." Finally, the following claim language is deleted from claim 1: "said control means providing control such that not all of driving of said print medium feeding means, driving of said print medium conveying means and said preliminary ejecting operation are simultaneously performed." Similar amendments are made to claim 5. Support for these claims amendments is found throughout the application as originally filed, including for example at Figure 6 and its associated text. No new matter will be added to this application by entry of these amendments. Entry is respectfully requested.

Each of the then-pending claims was conceded to be novel over the prior art by the present office action. However, the then-pending claims were alleged to be

obvious over certain cited references. Specifically, claims 1, 5 and 6 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,364,446 to Ishikawa et al. ("Ishikawa") in view of U.S. Patent No, 6,497,468 to Otsuka ("Otsuka"). Claims 2, 3 and 4 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Ishikawa as modified by Otsuka and further in view of U.S. Patent No, 4,872,026 to Rasmussen et al. ("Rasmussen").

B. Claims 1-6 Are Patentably Distinct from Ishikawa in View of Otsuka And In Further View of Rasmussen

The rejections of claims 1-6 are respectfully traversed. The cited references, taken alone or in combination, fail to teach, disclose or suggest all of the claim elements recited in the pending claims.

Specifically, Applicant's claim 1 recites:

> 1. An ink jet printing apparatus having carriage scanning means for moving and scanning a carriage on which a print head that ejects ink is mounted, print medium feeding means for feeding one of a plurality of stacked print media, and print medium conveying means for conveying said print medium fed by said print medium feeding means to a position where printing can be carried out using said print head, the apparatus comprising:
>
> control means for causing said print medium feeding means and said print medium conveying means to perform a print medium feeding and conveying operation in which said print medium is conveyed continuously while shifting said print medium from said print medium feeding means to said print medium conveying means and causing in parallel, performance of a preliminary ejecting operation during a part of the period of the performance of the print medium feeding and conveying operation,

> wherein there is an overlapping period in which said print medium feeding means and said print medium conveying means are driven simultaneously, and said control means provides control such that said preliminary ejecting operation is not performed in the overlapping period.

Ishikawa is directed to printing method and printing apparatus. With regard to the "control means" recited in Applicant's claim 1, no single element in Ishikawa is alleged to correspond. Instead, the office action cited to Figure 11 and attempts to cobble together various passages within Ishikawa as follows:

> "control means (Figure 11) for causing performance of a printing medium feeding and conveying operation of continuously conveying said print medium while shifting said print medium from said print medium feeding means (1009 of Figure 11) to said print medium conveying means (Column 7, Lines 43-57 Column 14, lines 11-15) and a preliminary ejecting operation (Column 22, Lines 49-58)." (5/2/06 Office Action at p. 2).

The passage at column 7, lines 43-57 relates to yet another figure, Figure 2, and describes operation of various drivers and motors:

> "Reference numeral 1710 denotes a carrier motor for transferring the printhead IJH in the main scanning direction; and 1709, a conveyance motor for conveying a printing sheet. Reference numeral 1705 denotes a head driver for driving the printhead; and 1706 and 1707, motor drivers for driving the conveyance motor 1709 and the carrier motor 1710.
>
> The operation of the above control arrangement will be described below. When a printing signal is input to the interface 1700, the printing signal is converted into printing data for a printing operation between the gate array 1704 and the MPU 1701. The motor drivers 1706 and 1707 are driven, and the printhead IJH is driven in accordance with the printing data supplied to the head driver 1705, thus performing the printing operation."

Figure 2 relates to a first embodiment shown in Ishikawa.

The passage at column 14, lines 11-15 relates to Figure 10. Figure 10 is not directed to the first embodiment, and is instead directed to a third embodiment disclosed in Ishikawa. To the extent the rejection is maintained, any subsequent office action should provide an explanation why it is proper to cobble together disparate features from distinct embodimetns in the cited references. See In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("One cannot use hindsight reconstruction to ***pick and choose*** among isolated disclosures in the prior art to deprecate the claimed invention.") (emphasis added); In re Arkley, 455 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972) ("random picking and choosing" of prior art is improper); Ex parte Beuther, 71 USPQ2d 1313, 1316-17 (BdPatApp&Int 2003) (unpublished) (reversing Section 103 rejection based on "eclectic combination" of portions of reference, where "only suggestion for proposed combination stems from hindsight knowledge impermissibly derived from applicants' disclosure.")

The cited passage mentions a feed motor (1009) "for conveying a printing medium" to a "print medium conveyance mechanism" as well as to "an automatic sheet feeder (ASF) 1013."

The final cited passage (at column 22, lines 49-58) is said to disclose the preliminary ejecting operation recited in the pending claims:

> "It is preferable to add recovery means for the printhead, preliminary auxiliary means, and the like provided as an arrangement of the printer of the present invention since the

> printing operation can be further stabilized. Examples of such means include, for the printhead, capping means, cleaning means, pressurization or suction means, and preliminary heating means using electrothermal transducers, another heating element, or a combination thereof. It is also effective for stable printing to provide a preliminary discharge mode which performs discharge independently of printing."

As best understood, the office action alleges the "preliminary discharge mode" of Ishikawa is alleged to correspond to the "preliminary ejecting operation" recited in Applicant's claim 1. Applicant notes that the above passage says that the preliminary discharge mode is "independent[] of printing."

The office action cites to one additional passage in Ishikawa at column 13, lines 45-62 as allegedly disclosing how the print medium feeding means, print medium conveying means and the preliminary ejection operation are coordinated. That passage describes the printing process as follows:

> "Referring to FIG. 10, the printhead 1001 is attached to a carriage 1002 in the manner such that the printhead discharges ink downward in FIG. 10. While the carriage 1002 moves along a guide 1003, the printhead 1000 discharges ink droplets to form an image on a print medium (not shown) e.g. print paper. Note that the lateral movement (reciprocal movement) of the carriage 1002 is realized by rotation of a carriage motor 1004 via a timing belt 1005. The carriage 1002 has an engagement latch 1006 which engages with an engagement slot 1007a of the ink tank, fixing the ink tank 1007 to the carriage 1002.
>
> Upon printing for one scan by the printhead, the printing operation is suspended, a print medium positioned on a platen 1008 is conveyed a predetermined amount by driving a feed motor 1009, and image forming for the subsequent scan is performed by moving the carriage 1002 along the guide 1003."

This passage simply describes that the printing operation is performed in one step and then the print medium is positioned in another step, and then the printing operation is resumed. This passage—as well as the balance of Ishikawa—is utterly silent as to the timing of this preliminary discharge mode.

Accordingly, Ishikawa fails to teach, disclose or suggest "there is an overlapping period in which said print medium feeding means and said print medium conveying means are driven simultaneously, and said control means provides control such that said preliminary ejecting operation is not performed in the overlapping period" as recited in Applicant's claim 1.

Otsuka is directed to printing apparatus, and method for controlling the power of the printing apparatus. Otsuka discloses that sheet feeding and sheet discharging are performed three ways:

> "(1) Sheet feeding for printing the first sheet of a printing medium.
>
> (2) Feeding of the succeeding sheet is started during an operation of discharging the preceding sheet after completing printing on the preceding sheet.
>
> (3) Feeding of the succeeding sheet is started while the preceding sheet is printed" (Otsuka, Col. 3, lines 21-30).

Case (1) is limited to first sheet feeding. Otsuka discloses little power is consumed by the carriage mechanism or the print head, because the print head is neither moved nor used for printing during this feeding operation. (Col. 3, lines 31-34). Thus, the automatic sheet feeder (ASF) has "highest priority" and feeds the printing medium toward the print head "at the highest speed. (Col. 3, lines 34-40).

The office action alleges that Otsuka discloses parallel performance of a preliminary ejection operation during a part of the period of the performance of the print medium feeding and conveying operation. (5/2/06 Office Action at p. 3). As support for that allegation, the office action cited the following passage of Otsuka:

> "… during the sheet feeding operation for printing the first sheet in the above-described case (1), for example, … a preliminary discharging operation for maintenance of the print head … may be performed…. In these cases, it is also possible to determine whether a sheet feeding operation is to be performed after completing the above-described operation, or driving is to be performed by limiting electric power during the above-described operation." (Col. 4, lines 26-35).

The first sentence in this cited passage is, at best, a suggestion to simultaneously conduct (1) a sheet feed operation and (2) a preliminary discharging operation. This undermines the office action's allegation regarding Otsuka. Accordingly, Otsuka—like Ishikawa—fails to teach, disclose or suggest "there is an overlapping period in which said print medium feeding means and said print medium conveying means are driven simultaneously, and said control means provides control such that said preliminary ejecting operation is not performed in the overlapping period" as recited in Applicant's claim 1.

The motivation for the proposed combination of Ishikawa and Otsuka also is flawed. In this regard, the office action alleges the motivation "would have been to optimize the distribution of electric power for a plurality of driving sources of the printing apparatus." (5/2/06 Office Action at p. 4). Applicant notes that no citation within the cited references themselves is provided to support the allegation. Without

finding the motivation in the prior art itself, the rejection is improper. MPEP § 2143.01. Moreover, the allegation is unclear. What is meant by "optimize the distribution"? What do the "driving sources" have to do with the "preliminary ejecting operation" recited in Applicant's claim? Further explanation and support within the cited references is necessary to elucidate why it allegedly would be obvious to simultaneously drive the print medium feeding means and the print medium conveying means, and prevent a preliminary ejecting operation during that simultaneous driving.

Rasmussen is directed to ink-jet printer with printhead carriage alignment mechanism. Rasmussen is cited in connection with dependent claims 2, 3 and 4. The office action does not allege that Rasmussen alleviates the above-described deficiencies in Ishikawa and Otsuka. At best, Rasmussen describes that the nozzles are fired a number of times on initial power-up, each time the cartridge (32) leaves the service station, each time a cap (266) is engaged) and periodically during printing. (Col. 19, line 63 – Col. 20, line 6). Accordingly, Rasmussen also fails to teach, disclose or suggest "there is an overlapping period in which said print medium feeding means and said print medium conveying means are driven simultaneously, and said control means provides control such that said preliminary ejecting operation is not performed in the overlapping period" as recited in Applicant's claim 1.

As Applicant cannot find all the recited elements of claim 1 in Ishikawa, Otsuka or Rasmussen, at least independent claims 1 and 5, and their dependent claims 2-4 and 6 are respectfully asserted to be in condition for allowance.

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Likewise, Applicant has chosen not to swear behind Baba, cited by the office action, at this time. Applicant, however, reserves the right, as provided for under 37 C.F.R. § 1.131, to do so in the future as appropriate.

Finally, Applicant has not specifically addressed the rejections of the dependent claims. Applicant respectfully submits that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested.

While no fees or extension of time are believed necessary for this Amendment, should an extension of time be required for the timely submission of this paper, such extension is hereby petitioned, and the Commissioner is hereby authorized to charge any additional fees which may be required for this Amendment, or credit any overpayment, to Deposit Account No. 13-4500, Order No. 1232-5267.

In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5267.

Respectfully submitted,
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